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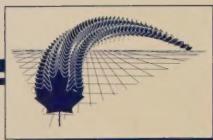
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"Viable and Effective" Transportation Services

*A Staff Report to the
National Transportation Act
Review Commission*

June 1992



Canada

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Catalogue No. TW4-1/6-1992E
ISBN 0-662-19527-2

Ce rapport est aussi disponible en français
This report is printed on recycle paper

"VIABLE AND EFFECTIVE" TRANSPORTATION SERVICES

EXECUTIVE SUMMARY

The Review Commission must consider whether the law helps to achieve a viable and effective transportation network. The question is whether or not services respond effectively and economically to shipper and traveller needs and adapt to long-run changes in those needs. Information is presented here, by mode of service, on how effective the network has been in meeting shipper and traveller needs; how the network has adapted to do so; and factors affecting long term adaptation.

Service effectiveness and viability

Since air regulatory reform began, service has improved markedly to meet demands for traveller convenience. Also, since the *National Transportation Act, 1987 (NTA, 1987)* was introduced, travellers have been more and more able to get discounts; airline revenues per passenger kilometre (yield) have, in constant terms, stayed about the same.

The industry has restructured, with extensive changes in services, equipment and marketing. Regional carriers and domestic charter carriers as groups have grown in importance. Faced with direct competition, they have increased revenues, service quality and capacity, as have major carriers.

Recently, however, the recession and the Persian Gulf war have cut the major airlines' revenues and profits, reducing the number of people flying and raising fuel costs. Carriers world-wide are attempting to deal with overcapacity and poor financial performance by stimulating demand and by seeking alliances with other carriers.

Shippers have reached rate agreements with railways for most traffic, which now moves under filed contracts. Also, a majority of shippers rated railways as providing good or very good service on a number of measures in recent Agency surveys. Lowest rated factors, however, included transit time, an important factor in choosing between truck and rail intermodal services.

CN and CP have each formed marketing and operating organizations covering all their North American operations, entered into marketing alliances with U.S. railways, and speeded up network rationalization. They have recently introduced new intermodal equipment and both carriers are increasing clearances on some main routes to permit use of double-stack container equipment.



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Overall, operating revenues have exceeded expenses on Canadian rail operations since the *NTA*, 1987 came into force, and investments have increased. CN, however, has had some operating losses. Work force adjustment costs cut profits for both railways. Earnings have also been eroded by drought-hit grain sales and by a recession-caused fall in high value Quebec/Ontario shipments.

According to Agency surveys, shippers have generally been satisfied with the level and quality of available trucking services since entry controls were relaxed in 1988. Excess capacity and availability of alternative carriers have kept rate increases low.

Truckers, faced by recently weakened demand and excess capacity are pruning operations, often by merging and consolidating. A number have become bankrupt, although the level of bankruptcies parallels those in sectors of the economy they serve, such as the primary products, manufacturing, and wholesale/retail trade industries. A new Federal Government financial assistance plan has recently changed depreciation rates and fuel tax programs to help the industry improve its financial performance.

Ocean carriage is largely performed by non-Canadian carriers whose financial performance is not reported to the Agency. Canadian ports and harbours are, however, a last vital link in surface transportation for many Canadian exports and a first for many imports.

The Ports Canada system has come under increasing competitive pressure to streamline and modernize operations. Modernization of Electronic Data Interchange systems and improvements in intermodal systems are necessary according to port officials and customers alike. Nonetheless, Ports Canada has been consistently profitable.

Influences

The transportation network is affected most by demand for shippers goods and passenger travel, factors largely outside transportation itself. Federal and provincial laws and regulations, advances in technology, and trade, tax and social benefit policies are other important factors.

Emerging issues

Emerging public policy issues include whether the costs and benefits of infrastructure investments are fairly allocated, whether the costs and benefits from taxes paid by Canadian carriers are fairly distributed, and the effects these have on the ability of Canadian carriers (especially railways) to compete with other modes and with U.S. carriers.

Carriers in all modes receive benefits from government spending, but the benefits are rarely tied to specific taxes. The balance between taxes and benefits does not clearly seem to favour one mode over others. Canadian railways pay more of some kinds of taxes than do U.S. railways, but U.S. railways are charged taxes that do not apply to Canadian railways. Overall, Canadian railways do not seem to be at a tax disadvantage to U.S. ones.

INTRODUCTION

According to paragraph 266(3)(a) of the *National Transportation Act, 1987 (NTA, 1987)*, the current review of transportation law must consider the effectiveness of existing policy and legislation in achieving a "network of viable and effective transportation services that are responsive to the needs of shippers and travellers...."

Information and analysis presented here is intended to assist the Review Commission in its considerations. This report by staff of the National Transportation Agency of Canada includes information for different transportation modes on how evolving shipper and traveller needs are being met, on the changes being made in industry organization and operations to meet those needs, and on factors influencing the continuing availability of transportation services.

"VIABLE AND EFFECTIVE"

The Commission is to consider how the current law and policy have contributed to the achievement of particular goals. According to the terms of paragraph 266(3)(a) of the *NTA, 1987*, the goal to be achieved is a "network of viable and effective transportation services that are responsive to the needs of shippers and travellers...."

The network is to be one of services which meet a particular test: do they respond to shipper and traveller needs? They are also to be "effective". It is not enough that services are intended to meet shipper and traveller needs, they must actually meet them, if the goal is to be achieved.

Services are also to be "viable". That is, long run conditions, adaptability to them, economical use of resources and economic returns should be of concern.

The terms "viable" and "effective" are to be considered together, and the service, not the service provider, is the primary focus. Carriers provide a mix of effective and ineffective, efficient and inefficient services. They report their financial results for the mix, not for the individual services. However, the distinction between the profitability of the carrier and the viability of

the service is to be borne in mind, even if only the former can be calculated from public information.

On the basis of this analysis, information was gathered to address the following questions:

Does the network of transportation services respond effectively and economically to shipper and traveller needs? Is the network adapting to long-run conditions? Are the services provided on a sound economic basis? What factors besides transportation law influence the development of the transportation network and how important are they?

AIR SERVICES

Since air regulatory reform began, airlines have answered demands for traveller convenience and rising demand for transportation with marked service improvements.

Passengers carried increased by about one third from 1984 to 1990 (from about 27.7 to 36.8 million). Flights between the top 25 Canadian city-pairs increased 46 percent from 1983, while available seats on those flights increased by 20 percent. The number of domestic city-pairs with direct (non-stop), indirect (same plane, one or more stops) and connecting (same airline) service has increased dramatically. In 1983, there were 1,088 weekly unidirectional non-stop and same-lane air services offered in Canada; by 1987 there were over 1,500 and, by 1991, almost 1,900.

These overall improvements occurred despite recent economic conditions which caused a 1990 decrease of 5.6 percent in passengers carried on scheduled domestic flights traffic, and a further 1991 decrease of 15.5 percent (business trips fell even more, about 17 percent).

To achieve these results, carriers have implemented extensive equipment and marketing changes and the industry has been extensively restructured. Faced with direct competition, regional carriers as a group have grown in importance, increasing revenues, service quality, and capacity.

Regional affiliates of major carriers carried about a quarter of scheduled passenger traffic in 1991, although because of their short-haul nature they generated less than 7 percent of passenger-kilometres. Revenues increased from under \$300 million in 1987 to over \$700 million in 1991.

Charter carriers offer important new domestic competition. In 1991, they flew 10 percent of offered capacity in the busiest markets (i.e. in 14 city-pairs that make up about 25 percent of the scheduled domestic market).

Changes in the network of air services and factors affecting its adaptability to changing demand are described in detail in another Agency Staff report in this series.

Revenues and profits of major airlines have been highly variable, responding to international as well as local economic and political conditions. Airline yields, the revenue received per passenger kilometre, have been essentially flat under the *NTA, 1987*, following a sharp drop between 1987 and 1988.

Operating revenues for level I-IV carriers as a whole climbed every year from 1983 through 1990, reaching over \$8.2 billion in that year. Except for the recession years of 1982, 1983, 1990 and 1991, these carriers earned operating profits of over \$100 million per year. However, after peaking at about \$360 million in 1987, operating profits declined as costs increased steeply and, for major airlines in 1990 and 1991, revenues did not.

The major factors in the recent reverse were the decline in passengers due to economic conditions, the Persian Gulf war which discouraged travel and raised fuel prices, and the cost of increasing capacity with delivery of new aircraft. These latter factors were particularly injurious to major carriers in part because their larger networks exposed them to a greater degree to general economic factors and international conditions. As well, the recession has cut air cargo, an important factor to these airlines. Appendix 10.4 shows details of carrier financial performance.

The recent poor financial performance of Canadian airlines is not an isolated event nor is it caused by conditions unique to Canada. As shown in Appendix 10.5, the world's airlines lost an estimated U.S. \$2.7 billion in 1990 and a further nearly \$4 billion in 1991, as they too suffered from traffic loss due to the Gulf War and economic recession. In response, they are attempting to stimulate demand and are seeking alliances with other carriers as the industry continues to restructure in face of the changing market forces and international demands for capital.

RAIL SERVICES

Shippers have been able to reach agreement on rate and service packages with railways, as indicated by the number of confidential contracts filed with the Agency. Effects of contracts which let railways tailor their services to individual customer needs are dealt with in more detail in an earlier Agency staff report on Rail Competitive Access.

In response to recent Agency surveys, just over half of shippers were of the opinion that the railways provided good or very good service according to a number of measures of service quality such as carrier cooperation, equipment supply and condition, and service reliability. The lowest rated factors, however, included transit time, claims handling and switching service. These are important factors in choosing between truck and rail intermodal services.

Restructuring to meet competition is under way in the Canadian railway industry. CN and CP, which together account for over 90 percent of all freight revenues in Canada, have each formed new marketing and operating organizations covering all their North American operations, and entered into marketing alliances with U.S. railways.

Both CN and CP began programs in 1991 to increase clearances on main routes to permit use of double-stack container equipment, and CN began operating regular double-stack services on some routes. CP Rail also introduced the use of RoadRailer equipment developed by Norfolk Southern in the U.S., while CN has agreed to test new intermodal integral train technology developed by M.O.Q. Rail Inc. in Canada.

CN and CP have trimmed roughly 2,900 miles of trackage from their systems through Agency authorized abandonments since 1987 (a further 300 were abandoned as a result of Canadian Transport Commission decisions with delayed effective dates). In the same period, the two railways conveyed another 400 miles to other carriers. A number of short line carriers have been formed and more are expected.

Grain, several other bulk commodities and intermodal shipments account for nearly 60 percent of railway tonnage moved. About 65 percent of traffic is for export, of which 19 percent is to the U.S. and 46 percent is offshore. Grain has an influence on railway profitability that is greater than any other commodity. Conversely, rail prices strongly influence commodity profits as transportation costs may amount to as much as 50 percent of delivered prices.

Overall, operating revenues have exceeded expenses on Canadian rail operations since the *NTA*, 1987 came into force and investments have increased. Nonetheless, CN has recently posted operating losses. Appendix 10.8 shows details of these financial results. U.S. Class I railways in total posted 1991 operating losses of \$38 million, according to preliminary figures from the Association of American Railroads. These losses were mainly a result of special charges for work force adjustment programs.

Work force adjustment costs recently cut profits for both CN and CP Rail. CN's annual public report noted that separation costs contributed to an increase in 1990 expenses, CN has also announced that over \$94 million of employee separation costs is included in their 1991 results. Workforce reduction costs cut operating profits for CP Rail System by over \$250 million in 1991, according to the parent company's annual report.

Railway earnings have also been affected by traffic conditions. Grain income especially has fluctuated because of droughts and international trade wars. Grain moved under provisions of the *Western Grain Transportation Act* generated an estimated \$1,220 million of \$6,520 million total rail operating revenues in 1987 (19 percent) but only \$800 million of a \$5,985 million total in 1989 (13 percent) and \$1,190 million of a \$5,880 million total in 1991 (20 percent).

As well, Quebec and Ontario were especially affected by the recession in the last two years. Revenues on high-value container shipments from and to those provinces dropped over 12 percent (for Quebec) and 23 percent (for Ontario) from 1989 to 1991. As a result mainly of these traffic conditions, rates of profitability have been lower in the past two years than in earlier years.

Roughly half of Canadian Class I railway operating expenses are for labour (wages and benefits), about the same as for U.S. Class I rail carriers. However, individual employees on average are paid less in Canada. Valuing the Canadian dollar at 88 cents U.S., the average Canadian rail employee received about \$49,000 CAN in 1990, including benefits, compared to about \$59,000 CAN in the U.S. On the other hand, the average Canadian employee also produced much less (2.7 million revenue ton-mille vs. 4.8 million in the U.S.). These lower productivity levels are another major factor affecting rail profits.

Productivity can be improved by lowering labour expenses or other expenses for current traffic, by increasing traffic, or by a combination of lowering expenses and increasing output. As noted above, labour expenses (wages and benefits) were nearly 50 percent of 1990 railway expenses. Plant costs (including materials and supplies, depreciation and rentals) were a further 25 percent, while fuel (including taxes) was another 10 percent.

These facts suggest that agreements on employment, work rules and wages, railway marketing and service operations -- railway management responsibilities -- will have a crucial bearing on the future viability of rail services.

TRUCKING SERVICES

Under 1987 legislative provisions, entry and exit restrictions in interprovincial and international trucking markets were left with the provinces and were generally relaxed.

According to Agency surveys, shippers have generally been satisfied with the level and quality of available trucking services since the provisions came into force, and rate increases have been low. In each year from 1988 to 1991, the vast majority of shippers reported that for-hire truck services had either improved or remained about the same. The majority (and in most cases a very large majority) of shippers reported rate increases under the inflation rate each year, for both truckload and less-than-truckload traffic.

Carriers reported that the opportunity to enter markets more freely allowed them to improve operational efficiencies. However, greater efficiency also means greater effective capacity.

A main concern for the industry has been to adjust capacity which had been artificially maintained by regulatory barriers and then further increased by new entrants. The problem of excess capacity has been worsened by a prolonged recession which weakened demand in recent years. As a result, mergers, consolidations, downsizing and rationalizing operations have occurred since 1987, and recently closures and bankruptcies have increased. Overall, though, the level of bankruptcies among trucking businesses closely parallels the overall bankruptcy level for all other sectors of the economy, comprising manufacturing, primary products, wholesale/retail trade, etc.

As shown in Appendix 10.10, trucking industry revenues grew from about \$5.2 billion to over \$10.2 billion by 1989. Operating profits stepped up from under \$200 million annually before 1983 to over \$300 million in 1984, hovering near \$400 million through 1988 before declining in 1989 to about \$350 million as costs rose more quickly than revenues. Statistics on industry financial performance for 1990 and later were not available at the time this report was written. As they will be effected by the recession, however, they will clearly be worse than in previous years.

A series of Federal Government sponsored studies examined Canadian transborder trucking competitiveness in 1991. A Federal Government financial assistance plan introduced in December, 1991, responded in part to findings of these studies and resulted in faster equipment depreciation rates and changes in fuel tax programs.

MARINE SERVICES

Ocean carriers compete world-wide, outside the jurisdiction of any single nation for most of their operations. Most of the carriers serving Canada are non-Canadian. Canadian legislation applies to one segment of marine transportation through the *Shipping Conferences Exemption Act, 1987* (SCEA). Another Agency staff report in this series examines operations of that Act. However, carrier financial performance is not examined as ocean carriers do not report it to the Agency.

SCEA affects only a part of Canada's scheduled liner traffic, about three per cent of Canada's trade. Most of Canada's overseas exports and imports move through Canadian ports and harbours, however, and their operations affect the operations of trucking, rail and ocean carriers as well as the shippers they serve. Ports and harbours do not operate under provisions of the NTA, 1987. Rather, they are governed by specific legislation of their own.

Over 240 million tonnes of Canadian trade moved by water in 1990, about 93 percent of which was bulk freight. About three quarters of this tonnage moved through facilities of Canada Ports Corporation and its affiliates (CPC). The remainder was split between movements through U.S. ports and movements through Canadian Harbour Commissions such as Thunder Bay, Toronto and Fraser River. CPC, including the separate Port Corporations such as Vancouver, Montreal and Halifax, moved nearly 182 million tonnes of cargo in 1991, most of which was dry and liquid bulk. CPC operations are vital for containers, and the Corporation moved over 12.5 million tonnes in containers in 1991.

The Ports Canada system has come under increasing competitive pressure to streamline and modernize operations. Modernization of Electronic Data Interchange systems and improvements in intermodal systems are necessary according to port officials and customers alike. In spite of growing global competition, especially from U.S. ports, Ports Canada has been consistently profitable. Recent operating income ranged from about \$22 million (1984) to \$30 million

(1987), and was about \$23 million in 1991, on a revenue base which grew from about \$102 million in 1983 to \$183 million in 1991, as detailed in Appendix 10.11.

INFLUENCING FACTORS

Major factors effecting transportation services and the financial performance of carriers are indicated in each of the above sections. In summary, the transportation network must respond to needs which vary generally with economic conditions, the resources of Canadian shippers, world trade and international trade agreements, among other factors. Transportation needs and services are also determined by conditions in particular markets, such as droughts, advances in technology, and decisions by the management of individual firms. Government decisions and the regulatory framework may limit or facilitate the effects of these factors.

EMERGING ISSUES

Canadian transportation operates in increasingly competitive markets. Unable simply to set market prices, carriers have increasingly become price takers. When they cannot raise prices, carriers must lower costs to increase profitability: carrier viability is a question of productivity.

Tax decisions have been raised as a particular issue for transportation, however, from two perspectives. Carriers have claimed that taxes and benefits from government infrastructure decisions are unfairly assigned and therefore undermine competition between modes. They have also suggested that Canadian taxes unfairly hurt Canadian carriers competing with U.S. ones.

Taxes and modal benefits

Railways own and use their own infrastructure, which they pay for directly from revenues they earn. Truckers, however, use highways which are paid for by taxes.

Railways complain that fuel taxes they must pay are used to build and maintain those highways. Railways, as well as paying for their own infrastructure, thereby help pay for infrastructure

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which benefits truckers. They argue that the fuel taxes they pay lower the costs for truckers and raise costs for railways. This, say the railways, gives an unfair advantage to truckers who compete with railways for traffic.

In Canada, unlike in the U.S., the money used to build and maintain highways comes from general government revenues, however, and not from specially dedicated taxes. These general revenues, supplied from general taxes, also pay for a variety of social and economic benefits, including benefits enjoyed by railways.

Canadian railways receive payments from the Federal Government, for instance, for carrying grain under provisions of the *Western Grain Transportation Act (WGTA)*. Truckers, among others, pay federal taxes which are part of those government revenues. The *WGTA* provisions encourage shippers to move grain to Canadian ports via Canadian railways. Canadian railway grain revenues are thereby effectively protected from competition. These revenues amounted to about \$1,380 million in 1987, about \$790 million in the drought year of 1989, and about \$1,190 million in 1991.

The amount of benefit any individual trucker receives from highway spending is not known precisely. Nor is it clear that the benefit is out of line with taxes actually paid by the trucker. Commercial truckers are not the only ones who use highways: since the use is shared, the benefits of highway spending are shared. Many attempts have been made to allocate highway costs among public and private truckers, private cars, buses, and other vehicles. No consensus has emerged on how this allocation is to be achieved.

Truckers as well as railways pay most taxes and licensing fees into general revenues, not into specific funds dedicated to paying for highway costs or grain subsidies.

Railways also enjoy certain benefits from control of their own infrastructure that are not shared by carriers using common infrastructure like highways.

For instance, railways can decide when, how, and to what standard they want to build and maintain the infrastructure they use, and therefore control their costs. Governments make these decisions for highway users and do not base their decisions just on the concerns of commercial carriers.

Truckers who stop serving a particular destination cannot sell the share of road they no longer use. When railways abandon operations, the line remains railway property and can be sold or developed in the normal manner.

Tax and benefit comparisons with U.S. rail carriers

In December 1991, the government announced a set of tax changes to assist Canadian carriers - - railways and airlines, as well as truckers.

Two features in particular affected railways:

- * A two-year loss offset program offering partial rebate of federal excise tax on diesel fuel in exchange for a reduction in the losses the railways would otherwise use to reduce future income taxes;
- * For acquisitions after December 6, 1991, the Capital Cost Allowance rate was increased from 7 to 10 per cent for railway cars and from 4 to 10 per cent for track and grading, traffic control and signalling equipment, bridges, culverts, tunnels and trestles which are ancillary to railway track.

However, railways allege that continuing differences in Canadian and U.S. tax treatment give U.S. carriers a competitive advantage. Because of this, staff have developed analyses of tax differences which were not developed for other modes.

CN and CP Rail are major participants in The Round Table on Transportation through the Greater Vancouver Gateway, which published in December 1991 a study on the relative positions of railways under U.S. and Canadian tax regimes (the Round Table Study). The Round Table findings, based on railway supplied information, serve as an excellent benchmark for Agency work.

Agency staff analyses indicate that Canadian fuel, sales and property taxes place a significantly higher burden on Canadian railways than they would likely bear if U.S. fuel, sales and property taxes were assessed on the same companies. The relative burden is not much changed if Canadian payroll taxes for CPP/QPP payments and U.S. Tier I payroll taxes equivalent to U.S. Social Security are added to the equation. Considering only these taxes, Agency staff concur with the Round Table Study that \$225 million in 1990 is a good estimate of the additional total burden on the two major Canadian carriers.

However, because Canada and the U.S. have different overall tax structures, it may be misleading to compare the balance of tax burdens and tax-paid benefits for carriers in the two countries using only a few elements of taxation.

In comparing the burden which Canadian railways would likely bear if assessed under the U.S. scheme, the Round Table study chose to exclude payroll taxes that Canadian railways would be assessed under U.S. law and which have no equivalent in Canada. For instance, U.S. railroads pay a payroll tax equal to just over 16 percent of wages to support "Tier II" retirement benefits. This tax is not assessed in Canada but applies to railways in the U.S. under federal jurisdiction.

The U.S. Tier II taxes are distinct from Canadian company payments to their private pension plans and the U.S. retirement benefits supported by Tier II taxes are distinct from private pension benefits. The amount that U.S. companies pay in taxes is set by Congress and the benefits that U.S. employees receive are also set by Congress and are not subject to negotiated changes. Strictly speaking, this is a tax burden on U.S. railroads for which there is no Canadian equivalent. However, because company pension costs in Canada go to support retirement benefits, these pension costs were in fairness balanced against Tier II taxes that would be payable in the U.S. for retirement benefits.

The inclusion of U.S. retirement taxes in this comparison reverses the results of the Round Table Study. Canadian railways would pay an estimated \$230 million per year more in pension taxes under the U.S. regime than in pension costs under the Canadian one. Considering all taxes and pension costs, CN and CP Rail combined would have paid slightly more under the U.S. regime than under the Canadian one, according to this analysis.

Tax rates alone, of course, are not the sole indicators of the total tax burden on any tax-paying entity. Tax rules used in calculations and the related accounting practices are clearly important. For instance, U.S. tax rules require railroads to capitalize and depreciate over time the costs of labour on various track construction projects. In Canada, railways deduct the full amount of labour costs in the year they are incurred. This rule therefore provides an additional element of tax advantage to Canadian railways.

The analyses above show that comparing tax regimes is complex and therefore may easily mislead. In comparing taxes, many factors must be weighed and including only some of them may completely change conclusions. As well, comparing taxes without comparing benefits provides an unbalanced picture which distorts the total effect of different tax regimes. The links between tax costs and the benefits are not simple and direct. Taxes paid by transportation companies are not simply "transportation taxes".

Number of Licenses Held by Air Carriers in Canada

Year	as of December 31			Percentage Change %
	Southern Canada Licenses	Northern Canada Licenses	Total	
1988	781	857	1,638	-
1989	846	957	1,803	10.1
1990	835	971	1,806	0.2
1991	868	1,009	1,877	3.9

Competing Airline Affiliate Financial Statistics

Air Canada¹ and Canadian Airlines²

Year	Operating Revenues	Percentage Change	Operating Expenses	Percentage Change	Operating Income ³
	\$ 000	%	\$ 000	%	\$ 000
1987	294,852	–	275,338	–	19,514
1988	425,030	44.2	388,512	41.1	36,518
1989	591,079	39.1	533,548	37.3	57,531
1990	763,746	29.2	705,198	32.2	58,548
1991	816,602	6.9	762,938	8.2	53,664

Notes: ¹ – Air Canada affiliates include only Air Nova, Air Alliance, Air Ontario, Northwest Territorial and AirBC.

² – Canadian Airlines affiliates include only Air Atlantic, Ontario Express/Canadian Frontier, Calm Air and Time Air.

³ – Operating Income = Operating Revenue – Operating Expenses and does not include other income and charges.

Yields: Air Canada and PWA Corp.

Year	Cents per Passenger Kilometre (constant 1986 dollars)
1986	9.29
1987	9.23
1988	8.45
1989	8.42
1990	8.51
1991	8.48

Canadian Air Carrier Financial Statistics (Levels I-IV)

Appendix 10.4

Year	Operating Revenues \$ 000	Percentage Change %	Operating Expenses \$ 000	Percentage Change %	Operating Income ¹ \$ 000	Operating Ratio
1975	1,833,207	—	1,766,705	—	66,502	0.96
1976	1,991,338	8.6	1,935,883	9.6	55,455	0.97
1977	2,279,073	14.4	2,135,038	10.3	144,035	0.94
1978	2,585,728	13.5	2,423,783	13.5	161,945	0.94
1979	3,131,687	21.1	2,971,154	22.6	160,533	0.95
1980	3,984,708	27.2	3,797,562	27.8	187,146	0.95
1981	4,648,846	16.7	4,494,367	18.3	154,479	0.97
1982	4,679,430	0.7	4,692,624	4.4	-13,194	1.00
1983	4,675,710	-0.1	4,608,685	-1.8	67,025	0.99
1984	5,092,569	8.9	4,931,453	7.0	161,116	0.97
1985	5,621,370	10.4	5,519,919	11.9	101,451	0.98
1986	5,980,819	6.4	5,738,418	4.0	242,401	0.96
1987	6,274,154	4.9	5,911,307	3.0	362,847	0.94
1988	7,136,375	13.7	6,873,580	16.3	262,795	0.96
1989	7,886,303	10.5	7,768,250	13.0	118,053	0.99
1990	8,231,859	4.4	8,228,093	5.9	3,766	1.00
1991 ²	6,077,467	-22.9	6,352,256	-18.2	-274,789	1.05

Note: 1 – Operating Income = Operating Revenue – Operating Expenses and does not include other income and charges.

2 – Preliminary figures.

Comprehensive Review Staff Working Group
National Transportation Agency of Canada
Source: Statistics Canada

International Air Industry Financial Statistics

Appendix 10.5

Year	Operating Revenues US\$ Billion	Percentage Change %	Operating Expenses US\$ Billion	Percentage Change %	Operating Income ¹ US\$ Billion	O.Inc. after Interest Exp. US\$ Billion
1981	36.1	—	36.7	—	—	-0.6
1982	36.7	1.7	36.9	0.5	-0.2	-1.9
1983	37.9	3.3	36.6	-0.8	1.3	-1.8
1984	39.5	4.2	37.3	1.9	2.2	-0.3
1985	40.7	3.0	39.1	4.8	1.6	0.8
1986	45.2	11.1	44.0	12.5	1.2	0.2
1987	53.8	19.0	51.3	16.6	2.5	-0.3
1988	60.9	13.2	57.5	12.1	3.4	0.9
1989	70.7	16.1	68.1	18.4	2.6	1.6
1990	91.0	28.7	90.5	32.9	0.5	0.3
1991 ²	91.7	0.8	92.3	2.0	-0.6	-2.7
						-4.0

Note: 1 – Operating Income = Operating Revenue – Operating Expenses and does not include other income and charges.

2 – Preliminary estimate.

Comprehensive Review Staff Working Group
 National Transportation Agency of Canada
 Source: International Air Transportation Association (IATA)

Confidential Rail Contracts and Amendments Filed with the Agency

Year	Contracts	Percentage Change	Amendments	Percentage Change
		%		%
1988	1,223	—	415	—
1989	2,525	106.5	1,286	209.9
1990	3,900	54.5	4,989	287.9
1991	5,086	30.4	8,278	65.9

Comprehensive Review Staff Working Group
National Transportation Agency of Canada
Source: Agency statistics

Railway Line Abandonments Based on Effective Date

	Year	Unprotected Miles	Protected Miles	Cumulative Total
CN	1988	187	0	187
	1989	816	0	1,003
	1990	233	0	1,236
	1991	142	22	1,400
	1992 ¹	56	0	1,456
CP Rail	1988	125	0	125
	1989	479	6	610
	1990	497	92	1,199
	1991	167	80	1,446
	1992 ¹	11	0	1,457
Total	1988	312	0	312
	1989	1,295	6	1,613
	1990	730	92	2,435
	1991	309	102	2,846
	1992 ¹	67	0	2,913

Note: 1 – per Orders issued as of December 31, 1991.

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 National Transportation Agency of Canada
 Source: Agency statistics

CN and CP Rail Financial Statistics

Appendix 10.8

Year ¹	CN			CP Rail		
	Operating Revenues	Operating Expenses	Operating Income ²	Operating Revenues	Operating Expenses	Operating Income ²
	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000
1975	1,673,857	1,743,101	-69,244	1,063,921	990,844	73,077
1976	1,960,178	1,884,596	75,582	1,210,538	1,115,965	94,573
1977	2,141,530	2,008,732	132,798	1,274,035	1,179,242	94,793
1978	2,339,235	2,207,938	131,297	1,408,962	1,302,094	106,868
1979	2,690,442	2,460,790	229,652	1,597,103	1,456,066	141,037
1980	2,868,810	2,676,379	192,431	1,757,727	1,619,299	138,428
1981	3,092,037	2,835,688	256,349	2,052,577	1,903,222	149,355
1982	2,991,944	3,090,674	-98,730	2,134,336	1,904,050	230,286
1983	3,413,020	3,208,992	204,028	2,418,728	2,056,374	362,354
1984	3,828,471	3,577,796	250,675	2,550,147	2,204,795	345,352
1985	3,763,290	3,403,040	360,250	2,513,697	2,159,681	354,016
1986	3,662,675	3,371,286	291,389	2,570,513	2,185,723	384,790
1987	3,722,868	3,316,840	406,028	2,790,242	2,281,771	508,471
1988	3,780,722	3,297,407	483,315	2,717,066	2,311,949	405,117
1989	3,514,711	3,208,218	306,493	2,464,816	2,254,799	210,017

Note: ¹ – Figures post-1989 not publicly released at time of printing.

² – Operating Income = Operating Revenue – Operating Expenses and does not include other income and charges.

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Source: Statistics Canada

Estimated CN and CP Rail Grain Revenue

Appendix 10.9

Year	Tonnage Carried 000 Tonnes	Shipper Payments ¹ \$ 000	Government Payments \$ 000	Total Revenue (est.) \$ 000	
				CN	CP Rail
CN	1984	17,507	147,546	337,802	485,348
	1985	13,266	92,811	276,220	369,031
	1986	15,527	96,112	380,279	476,391
	1987	17,731	142,856	453,206	596,062
	1988	15,835	147,599	388,476	536,075
	1989	13,130	132,118	325,565	457,683
	1990	14,442	158,642	336,598	495,240
	1991	18,736	210,309	406,283	616,592
CP Rail	1984	15,427	123,266	282,214	405,480
	1985	12,037	80,336	239,091	319,427
	1986	13,838	82,274	325,529	407,803
	1987	19,993	150,077	476,113	626,190
	1988	15,582	135,597	356,886	492,483
	1989	10,810	97,755	240,888	338,643
	1990	14,253	146,220	310,243	456,463
	1991	18,288	195,695	378,051	573,746
Total	1984	32,934	270,812	620,016	890,828
	1985	25,303	173,147	515,311	688,458
	1986	29,365	178,386	705,808	884,194
	1987	37,724	292,933	929,319	1,222,252
	1988	31,417	283,196	745,362	1,028,558
	1989	23,940	229,873	566,453	796,326
	1990	28,695	304,862	646,841	951,703
	1991	37,024	406,005	784,334	1,190,339

Note: 1 – estimate based on government payment x shipper/govt. share ratio on a calendar year basis.

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National Transportation Agency of Canada

Source: Agency statistics

Canadian Trucking Financial Statistics (For-Hire Carriers)

Year	Operating Revenues \$ 000	Operating Expenses \$ 000	Operating Income ¹ \$ 000
1975	2,572,789	2,459,201	113,588
1976	2,863,822	2,746,863	116,959
1977	3,270,146	3,133,471	136,675
1978	4,020,952	3,854,949	166,003
1979	4,665,657	4,470,040	195,617
1980	5,223,804	5,060,137	163,667
1981	5,687,114	5,497,951	189,163
1982	5,588,523	5,448,737	139,786
1983	6,087,741	5,845,764	241,977
1984	7,114,620	6,775,743	338,877
1985	8,209,643	7,844,708	364,935
1986	8,628,082	8,208,641	419,441
1987	9,344,837	8,936,620	408,217
1988	9,611,710	9,212,772	398,938
1989	10,224,417	9,872,206	352,211

Note: 1 – Operating Income = Operating Revenue – Operating Expenses and does not include other income and charges.

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National Transportation Agency of Canada

Source: Statistics Canada

Ports Canada Financial Statistics¹

Appendix 10.11

Year	Operating Revenues	Operating Expenses	Operating Income ²
	\$ 000	\$ 000	\$ 000
1984	200,671	178,421	22,250
1985	139,495	116,961	22,534
1986	159,884	137,816	22,068
1987	169,888	139,618	30,270
1988	169,471	140,930	28,541
1989	170,032	147,757	22,275
1990	180,008	154,774	25,234
1991	182,866	159,587	23,279

Note: 1 – for Ports of Vancouver, Prince Rupert, Montreal, Quebec City, Saint John, Halifax, St. John's and those of the Canada Ports Corporation.

2 – Operating Income = Operating Revenues – Operating Expenses and does not include other income and charges.

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National Transportation Agency of Canada
Source: Ports Canada

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